

ABSTRACT OF THE DISCLOSURE

A semiconductor device having non-volatile memory devices. Each of the non-volatile memory devices has a word gate formed above a semiconductor layer with
5 a gate insulating layer interposed, impurity layers formed in the semiconductor layer, and sidewall-shaped control gates formed along both side surfaces of the word gate. Each of the control gates consists of a first control gate and a second control gate adjacent to each other. A first insulating layer is disposed between the first control gate and the semiconductor layer, and a second insulating layer which has the thickness
10 less than the first insulating layer is disposed between the second control gate and the semiconductor layer. An uppermost layer of the second insulating layer is a charge transfer protection film.